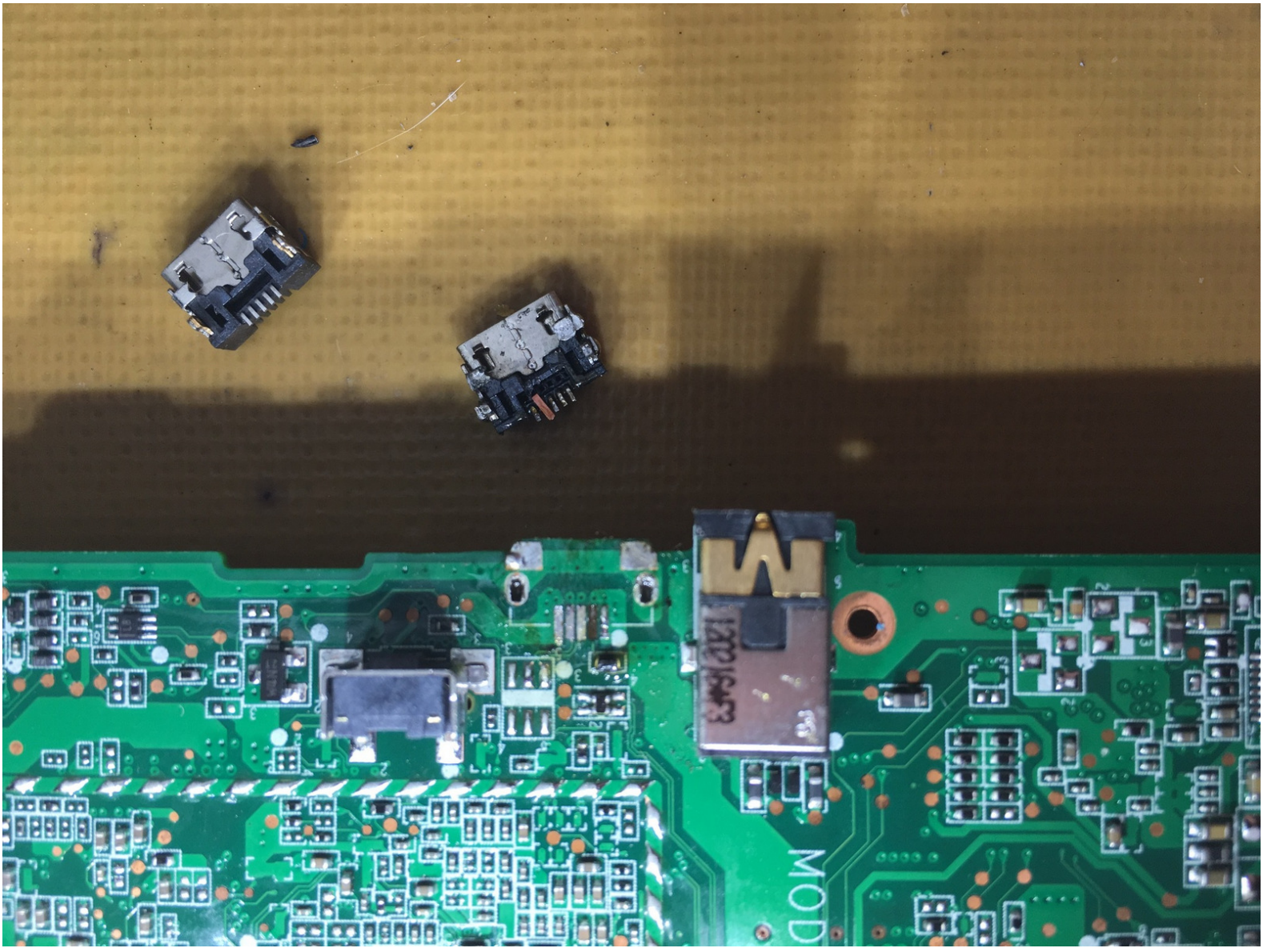
Tips on How to micro Solder on a budget

Would love to have some of the great equipment iFixit sells but what I have is older equipment and a need to fix a broken trace on a Kindle Fire. These steps can be used on array of problems. BUT REMEMBER, don't try unless your sure of your skills.

Written By: mactech plus



INTRODUCTION

Purpose of this guide it to show that in a pinch you can fix some really small problems without lots of money or equipment. But you must have patience.

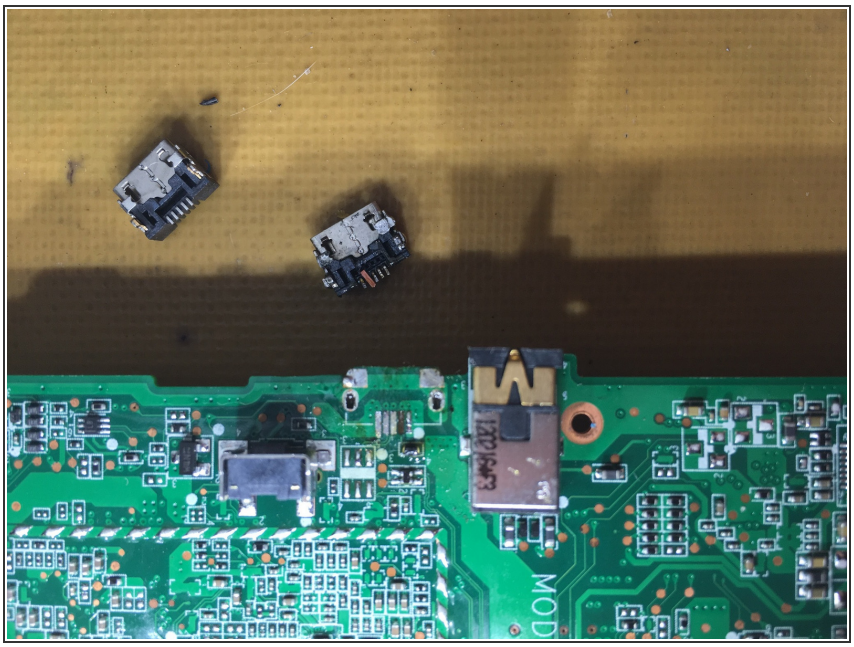
TOOLS:

- A quality Soldering station. (1)
- A strong magnifying lens (1)
- Small pair of Tweezers (1)
- Mechanical third hand device (1)
- Strong movable light sourse (1)
- Xacto type knife (1)

PARTS:

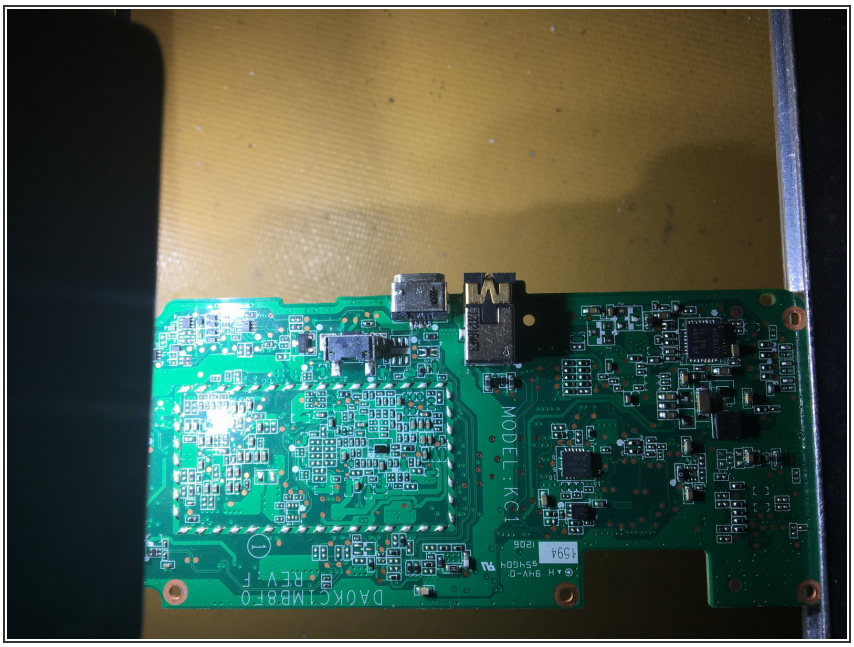
- 60 mm solder (1)
- Electrical Tape in 6 Assorted Colors (1)
- Liquid Soldering Flux (1)
- Solder removal braid (1)
- Wire of small guage (1)

Step 1 — Remove defective part



- Problem was broken power connecter on grandsons Kindle. Removed bad connector and broken trace came up with part. New connector also shown.
- I used a soldering iron with a 700 degree tip and de-solder braid to remove defective part. Hot air gun would have been a better option but I didn't have one.
- Note: enlarge image to zoom in to see fine detail. Also how I checked work

Step 2 — Prep for repair

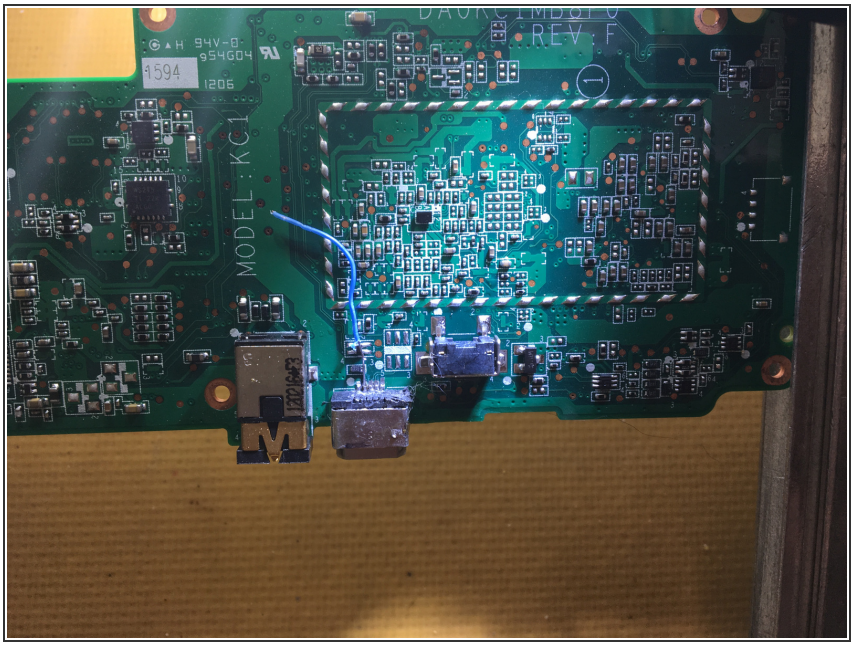


- After cleaning up the board and reseating new socket I simply resoldered in place. Now with the new socket installed, I needed to connect the unsoldered lead to the data port on board.

To find where the trace/lead went to I went to the Internet to find where it connected. I found many usable images to determine the path.

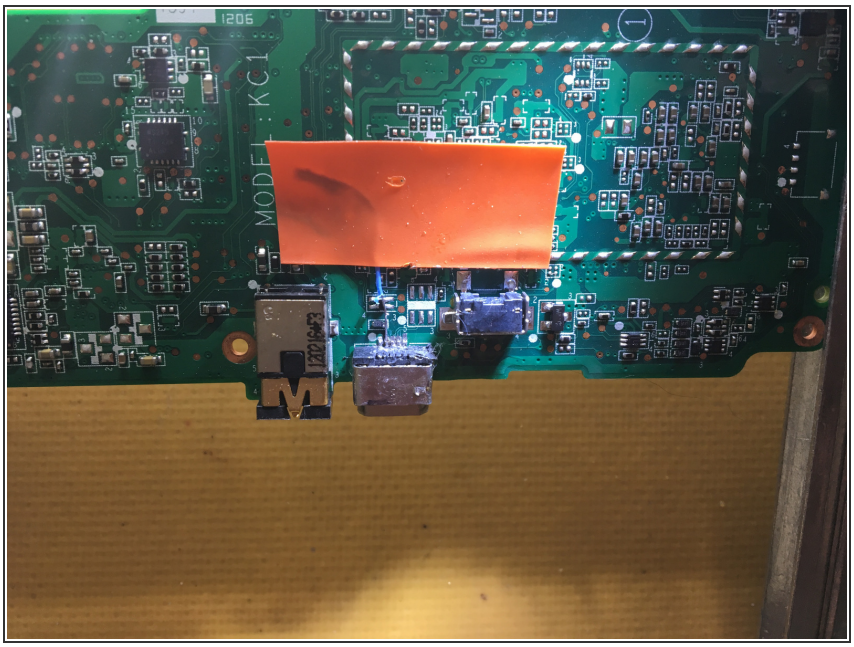
- To remove the coating on the board where I needed to solder , I scrapped away the coating with an Xacto knife.

Step 3 — Prep to solder



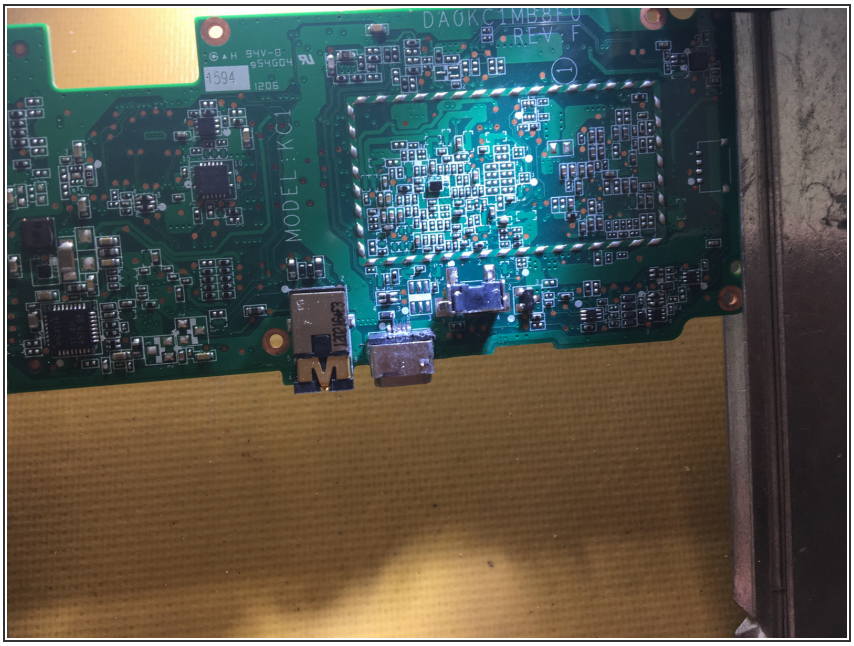
- Stripping and tinning a piece of 60mm wire I layed it in the path where I needed to attach. I bent the wire to give better leverage.

Step 4 — Secure wire for soldering



- Putting a piece of electrical tape over a bent wire kept it in place

Step 5 — Trim to fit

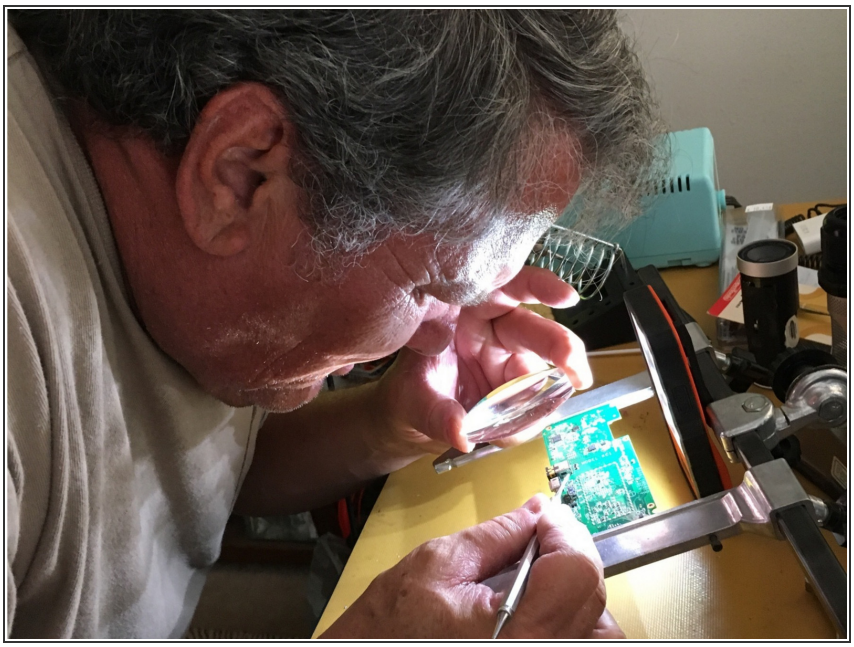


- Using a fine tip on my iron , I again used a 700 degree tip , dabbed the area with liquid flux and soldered the wire to the lead and exposed trace.
- When done I removed tape, cleaned flux off and trimmed wire to length.
- Please Note: you must have a steady grip on your iron to attach the wire. By using a long wire, you make it easier to keep it in place as you solder and it's so thin you can remove the excess wire with little stress to the repair.

Step 6 — Size reference

- The repair was the size of the wire next to the finger posted here

Step 7 — Seeing up close



- Not very high tech, but it got me through this without a proper scope. In this image I was verifying I didn't have any solder bridges on socket.
- When everything was cleaned back up I put the Kindle back together and it charges and plays like it should.
- When I was done soldering I used my iPad Pro 9.7 to take hi resolution image that I could view and blowup to ensure the repair was intact and clean

using this technique, you can get yourself out of a pinch by repairing an item half the length of rice ,and half as thick.

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